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## Hypertension in pregnancy

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**Background:** Arterial hypertension (AH) in pregnancy is linked to lifelong cardiovascular (CV) morbidity. Carotid artery intima media thickening (CAIMT) is considered as a marker of atherosclerosis and is associated with increased CV morbidity as well. It is known that rates of low birth weight or intrauterine growth restriction (IUGR) is raising women's lifelong (as well as of newborns later in life) CV morbidity, incidence of type 2 diabetes mellitus and/or arterial hypertension.

**Purpose:** The aim of this study is to determine the association between arterial pressure during pregnancy, CAIMT, physical examination data, risk-factors, parity, offspring birth weight, gestational age for delivery. Methods: 54 consecutive pregnant women (19 -38 yy old, mean age 27.3+/- 3.4) registered throughout three months in Maternal-Foetal Medicine Unit were allocated in two groups according to common CAIMT, I gr. - intima/media >0.9 (N-11), group II – CAIMT <0.9(N – 43); All participants completed a questionnaire for assessment of CV risk factors, underwent physical examination, ultrasound of both common carotid arteries to determine CAIMT. Physical data, risk-factors (obesity, stress, sedentary lifestyle, family history, blood pressure,) parity, offspring birth weight, gestational age for delivery were collected. Patients were re-evaluated in one year after delivery.

**Results:** In group I was found to have significantly less mean age (26,5 vs 32.9), less parity (2.3 vs 4.7 p<0.001), less number of CVD risk factors (1.4 vs2.7 p<0.001), higher offspring birth weight (3.34 vs 2.6, p<0.05), more gestational age for delivery (39 weeks vs 32 weeks), lower incidence of Arterial hypertension. Group II was found to have higher body mass index (32.8 vs 26.0), mean arterial pressure, family history of CVD and diabetes, higher incidence of Arterial hypertension. In one year after delivery 54% (6 p-ts) of patients from group I had presented with arterial hypertension versus 3% out of group II.

**Conclusion:** CIMT in pregnancy is associated with lower offspring birth weight, less gestational age for delivery, higher incidence and levels of blood pressure; pregnant women with CIMT have more risk factors such as a family history of CVD, body mass index, arterial pressure, hence have higher CVD risk. Early detection of increased CIMT in pregnancy would lead to closer observation of women during and after pregnancy, early detection of development of Atherosclerosis, and may have influence on reduction of the incidence of complications of cardiovascular events.

## Biography

Tamar Vakhtangadze is an Associate Professor of Tbilisi Medical Academy, Assistant Professor of Caucasus International University, Cardiologist at Research Institute of Clinical Medicine, Head of Cardiology Service at Medical Centre of GEOSWISS, Head of Outpatient Cardiology Service at St. Joakim and Anna Medical Centre. She is the Fellow of European Society Cardiology, member of the board of Georgian Society of Cardiology, Head of working group on women's cardiovascular morbidity of Georgian Society of Cardiology, member of the board of Georgian Society of Atherosclerosis, Executive Director of Georgian Society of Atherosclerosis, and member of editorial board of journal "Actual Topics of Women's Health". She is the author of more than 60 publications. Her main fields of interest include ischemic heart disease, atherosclerosis, heart failure, cardiomyopathies, women's cardiovascular health, and non-invasive imaging.

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